

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



553226

(43) International Publication Date
21 October 2004 (21.10.2004)

PCT

(10) International Publication Number
WO 2004/089990 A1

(51) International Patent Classification⁷: **C07K 16/28**, G01N 33/68, C12N 5/06, A61K 39/395, A61P 9/10

(21) International Application Number:
PCT/SE2004/000580

(22) International Filing Date: 14 April 2004 (14.04.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
0301087-3 14 April 2003 (14.04.2003) SE
60/320,112 16 April 2003 (16.04.2003) US

(71) Applicant (for all designated States except US):
CARTELA AB [SE/SE]; BMC, B 12, LUND, 221 84 (SE).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **LUNDGREN-ÅKER-LUND, Evy [SE/SE]; Trollsjövägen 165, BJÄRRED, 237 33 (SE).**

(74) Agent: **ALBIHNS STOCKHOLM AB; Linnégatan 2, Box 5581, S-114 85 Stockholm (SE).**

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

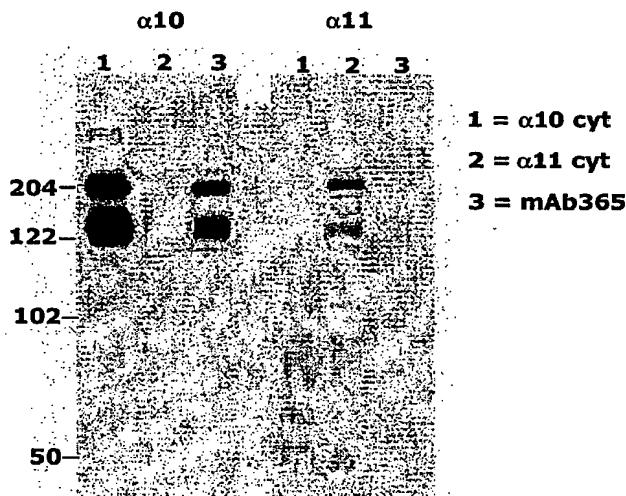
(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: NEW MONOCLONAL ANTIBODY CAPABLE OF BINDING INTEGRIN ALPHA 10 BETA 1



WO 2004/089990 A1

(57) Abstract: The present invention provides a monoclonal antibody or a fragment thereof binding to the extracellular I-domain of integrin alpha10beta1 and a hybridoma cell line deposited at the Deutsche Sammlung von Mikroorganismen und Zellkulturen GmbH under the accession number DSM ACC2583. Furthermore, the present invention also provides a monoclonal antibody or a fragment thereof binding to the extracellular I-domain of integrin alpha10beta1 produced by the hybridoma cell line deposited. Methods and uses of said antibody or a fragment thereof in identifying and selecting cells of a chondrogenic nature for treatment purposes, in particular for the identification and isolation of chondrocytes, mesenchymal progenitor cells and embryonic stem cells for tissue engineering of cartilage, or for identifying diagnostic and therapeutic tools in studying the biological role and the structural/functional relationships of the integrin alpha10beta1 with its various extracellular matrix ligands are also included.